

CLAIMS:

1. An interfacing device that integrates feeders mechanisms and surface mount machines of differing manufacture, comprising:

a carriage (10) to which a feeder plate mechanism (12) (12) is mounted, wherein said carriage provides external feeder connectors (34) from the surface mount machine to the feeder plate mechanism (12); and

a plurality of feeder mechanisms (40) which are received by said feeder plate mechanism (12), and wherein said feeder mechanisms (40) provides internal feeder connectors (26) from said feeder plate mechanism (12) to said plurality of feeder mechanisms (40), wherein said feeder plate mechanism (12) adapts said external feeder connectors (34) to said internal feeder connectors (26).

2. The interfacing device of Claim 1, wherein said external feeder connectors (34) comprise pneumatic and electrical connections.

3. The interfacing device of Claim 1, wherein said internal feeder connectors (26) comprise pneumatic and electrical connections.

4. The interfacing device of Claim 1, wherein a switch within the surface mount machines allows an operator to select a type of feeder mechanism within said interface device.

5. The interfacing device of Claim 1, wherein positioning pins (32) within said interfacing device align components coupled by said internal feeder connectors (26) and said external feeder connectors (34).

6. The interfacing device of Claim 1, wherein said feeder plate mechanism (12) further comprises a top plate assembly used to couple said feeder plate mechanism (12) to the surface mount machine.

7. The interfacing device of Claim 1, wherein said carriage (10) further comprises a tape dump (14) operable to catch spent feeder tape expended by feeder mechanism.

5 8. The interfacing device of Claim 1, wherein said carriage (10) further comprises casters (28) that allow an operator to easily reposition the interfacing device to and from the surface mount machine.

9. The interfacing device of Claim 1, wherein said feeder plate mechanism (12) further comprises mechanical locks to secure said feeder mechanisms (40) within said feeder plate mechanism (12).
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10. The interfacing device of Claim 1, wherein said carriage (10) comprises a frame of adjustable height.

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11. A method of interfacing and integrating feeders mechanisms to surface mount machines of differing manufacture, comprising:

mounting a feeder plate mechanism (12) to a carriage, wherein said carriage (10) provides external feeder connectors (34) from the surface mount machine to the feeder plate mechanism (12); and
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connecting a plurality of feeder mechanisms (40) to said feeder plate mechanism (12), wherein said feeder mechanisms (40) couple to said feeder plate mechanism (12) via internal feeder connectors (26), wherein said feeder plate mechanism (12) adapts said external feeder connectors (34) to said internal feeder connectors (26); and

25 coupling said carriage (10) to the surface mount machine, and selecting via a switch within the surface mount machine the type of feeders contained within said feeder plate mechanism (12).

12. The method of Claim 11, wherein said external feeder connectors (34) and said internal feeder connectors (26) comprise pneumatic and electrical connections.
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13. The method of Claim 11, wherein positioning pins (32) within said interfacing device align components coupled by said internal feeder connectors (26) and said external feeder connectors (34).

14. The method of Claim 11, wherein said feeder plate mechanism (12) further comprises a top plate assembly used to couple said feeder plate mechanism (12) to the surface mount machine.

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15. The method of Claim 11, wherein said carriage (10) further comprises a tape dump (14) operable to catch spent feeder tape expended by feeder mechanism.

16. The method of Claim 11, wherein said carriage (10) further comprises casters (28) that allow an operator to easily reposition the interfacing device to and from the surface mount machine.

17. The method of Claim 11, wherein said feeder plate mechanism (12) further comprises mechanical locks to secure said feeder mechanisms (40) within said feeder plate mechanism (12).

18. The method of Claim 11, wherein said carriage (10) comprises a frame of adjustable height.

20 19. An interfacing device that integrates feeders mechanisms and surface mount machines of differing manufacture, comprising:

a carriage (10) to which a feeder plate mechanism (12) is mounted, wherein said carriage (10) provides external feeder connectors (34) from the surface mount machine to the feeder plate mechanism (12), wherein said external feeder connectors (34) comprise pneumatic and electrical connections;

25 a plurality of feeder mechanisms (40) which are received by said feeder plate mechanism (12), and wherein said feeder mechanisms (40) provides internal feeder connectors (26) from said feeder plate mechanism (12) to said plurality of feeder mechanisms (40), wherein said internal feeder connectors (26) comprise pneumatic and electrical connections, wherein said feeder plate mechanism (12) adapts said external feeder connectors (34) to said internal feeder connectors (26), and wherein mechanical stops and positioning pins (32) secure said feeder mechanisms (40) within said feeder plate mechanism (12); and

30 a means for selecting a type of feeder mechanism contained within said interface device.

20. The interfacing device of Claim 19, wherein said carriage (10) further comprises:

- 5 a tape dump (14) operable to catch spent feeder tape expended by feeder mechanism;
- casters (28) that allow an operator to easily reposition the interfacing device to and from the surface mount machine; and
- a means for adjusting a height of said carriage.